

STING II

Digital Video Recorder/Player

User's Guide

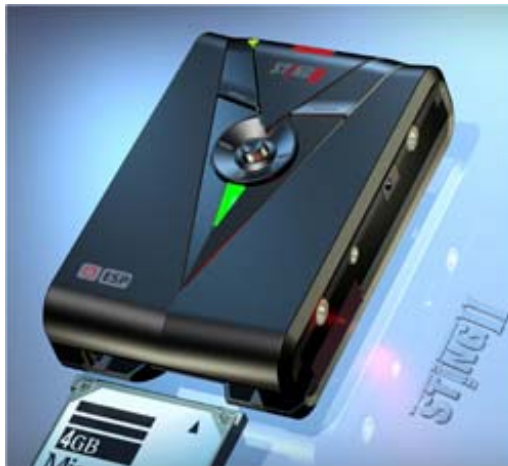


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Introduction

STING II is a wearable video/audio digital recorder capable of recording video and audio in MPEG-2 format. Recordings are stored on Microdrive or Compact Flash plug-in cards and can then be played back using the STING II, downloaded from the Microdrive to a personal computer or accessed remotely.



STING II is designed mainly for surveillance purposes by law-enforcement and government organizations, for portable video/audio recording featuring the highest quality available. The STING II accepts composite video input from any video camera. It includes the ability to:

- Discreetly start and end recording sessions
- Encrypt audio/video, video only, or audio files
- Capture still images (in jpeg format)
- Trigger recording sessions based on motion detection
- Capture individual jpeg images from streaming video files
- Authenticate that recording sessions have not been edited or tampered with, based on STING II's automatically embedded watermark functionality

In addition to the STING II unit, the STING II solution includes Setup software embedded in the device, a Media Center application enabling you to connect the STING II directly to your laptop or personal computer, and a remote web interface that lets you view and capture images and files remotely.

STING II Description

The STING II is a compact unit, featuring many options and connection options, including:

- Ethernet cable (with RJ-45 connection)
- USB 2.0 cable
- Monitor or TV

Top View

The top of the STING II unit offers:

- Instant access to the Setup menu (see [Setup Main Menu](#) on page 14)
- The ability to start and stop recording (see [Recording Methods](#) on page 12)
- Several LEDs that indicate the STING II status (see [STING II LED Indicators](#) on page 5)



Menu Control

The Menu control joystick is used to access the Setup application. Once you connect the device to the appropriate monitor or television (see [Connecting and Configuring the STING II](#) on page 8), and turn the STING II on, press the center of the joystick on the top of the STING II to access the Setup application.



- Press the center circle to the left, right, up or down to navigate through the menu options of the Setup application.
- Use the right button to return to a previous screen.
- Use the left button to close the Setup application.

For more information, see [Setup Software](#) on page 14.



You can also use the remote control to access the Setup menu. For more information, see [Using the Remote Control](#) on page 38.

Left Side View

The left side of the STING II unit offers:

- Wired Remote
- USB 2.0
- Ethernet
- DC In



Right Side View

The right side of the STING II unit offers:

- AV/Out
- Mic In
- 5V Out
- AV/In



Bottom View

The bottom of the STING II unit offers access to the Virtual port, enabling you to establish a GPRS 3G or WiFi connection to the Internet to upload files or enable remote access to the unit. A special adapter, which can be purchased separately, is required to make this connection.



STING II LED Indicators

The STING II LEDs indicate the status of the unit as it is powering up. Once the unit is operating fully, the LEDs indicate the recording status of the unit. While the unit is in the process of powering up, the triangle LED of the unit will flash green.

The LEDs on the STING II device also indicate the status of the device and/or the memory card capacity.

Charging LED

When the STING II is plugged in and charging, the round LED on the top of the device will be green.



The Charge LED will turn off when the device is fully charged. However, on some occasions, when you plug the charger into the STING II device and the battery is fully charged, the charge light will remain lit.



Memory Card Status

The color of the triangle LED indicates the status of the memory available on the memory card.

LED Indicator	Color	Percentage Used
	Green	0 – 25%
	Blue	25 – 50%
	White	50 – 75%
	Red	75 – 100%

Package Contents

- STING II Digital Recorder
- 2 Audio/Video Cables
- Ethernet cable with a RJ45
- Mini USB to normal USB cable
- Vibrating remote control cable
- Infra red remote control
- USB Cable
- Universal Battery Charger
- Sting Media Center Software (Including STING II User Guide on a CD)
- 4GB Microdrive

Connecting the A/V Cable

The A/V cable has two RCA-type sockets on one end, and a 3.5mm plug on the other end, which connects to the STING II.

To connect the A/V cable to the STING II:

- Plug the 3.5mm plug into the Video In socket on the STING II. Make sure it is plugged all the way into the center hole.

Connecting a Camera or Microphone

You can connect any video camera to the STING. If the camera operates on 5VDC, it can draw its power from the **Camera Power Out** socket, as long as the current consumption does not exceed 200mA. If the camera does not comply with these requirements, it should be powered by its own battery.

Alternatively, you can connect an amplified microphone, or any other device that sends out a line-level signal. An amplified button microphone is sold separately.

Getting Started

The STING II Digital Video Recorder allows you to record and view MPEG-2 videos. However, before you can begin working with the STING II you should:

- Charge the battery for the first time
- Connect and configure the STING II
- Set the current date and time
- Set the configuration options in the Media Center

Charging the Battery

Before using the STING II for the first time, it is highly recommended that you charge the battery over night. Once this initial charge has been accomplished, you will only need to charge STING II for 4 hours each time the battery gets low to ensure maximum battery power during operation. The unit comes with a universal auto-switching AC/DC power supply with an input range of 110 – 240 volts AC and an output voltage of 9 volts DC

To charge the battery:

1. Connect the power supply to the unit.
2. Plug the power supply into the electricity and charge the unit for several hours (at least 8 hours during the initial charge).

Make sure the switch is on the **Off** position on the STING II.

Connecting and Configuring the STING II

STING II comes with a number of cable and connection options. Initially, you must charge the unit (as specified above) and then set the time and date to be used during record mode. This is done in the Setup software application (see [Time Date Stamp](#) on page 20).

You can configure the unit's encryption password via the STING II Media Center (see [Creating an Encryption Password](#)).

Other settings are configured using the Setup software. The STING II remembers the configuration settings and applies them automatically to all recording sessions. To change the configuration settings, connect the STING II to the Setup application.

Connecting the STING II via USB

You can connect the STING II via USB to your computer. This will enable you to access the files directly via your Windows Explorer or by using the STING II Media Center.

To connect the STING II using a USB Cable:

1. Verify that the STING II is **Off**.
2. Connect the USB cable to the computer and to the STING II.
3. Press the center navigation joystick and hold it down while turning the STING II **On**.
4. Wait a few seconds while the LED on the STING II flashes.
5. Release the center key. You should see that your computer now recognizes the USB connection and you can access the files on the STING II.

To disconnect the STING II, it is important to first turn the STING II **Off**, and then disconnect the USB cables from the computer and the STING II.

Deleting One or More Files Via the Setup Menu

You can delete one or more files via the Setup menu. However, before deleting them, you should confirm that you have saved the files to a backup location.

To delete one or more files:

1. While the Sting is connected to a television or monitor, press the center button and release it. This will open the Setup Menu.
2. Click the Event Library option to see a list of files.
3. Select one file and click the center button again and release immediately. This will open an options menu enabling you to choose from: **Play**, **Delete**, or **Delete All**.
 - To delete one file, click **Delete**.
 - To select all files, click **Delete All**.
4. You are asked to verify your selection. Click **OK** to delete one or all of the files, or **Cancel** to close the window without deleting any files.

Reformatting the Compact Flash or Microdrive

You can easily format the compact flash or Microdrive currently stored on the STING II.

Note: This will permanently delete all the files currently saved on the compact flash or Microdrive disk.



To delete all the files on the Compact Flash or Microdrive disk:

1. Press the **center** button and hold it down.
2. While still holding the **center** button, press the **left** button and hold it down.
3. While pressing both of these, also press the **right** button and hold for 3 seconds. The top green LED will start blinking to indicate the STING II is in the process of deleting the files. This may take from a few seconds to a few moments (depending of how full the memory card is). When the LEDs stop flashing, the files are erased and the both LEDs will be solid green.

Alternatively, you can use one of the following options to delete the files:

- Connect the STING II via the USB cable to your computer and use Windows Explorer to delete all the files.
- Use the STING II Media Center to delete the files (highlight the files and select **Delete Files**).

Recording Sessions

The STING II provides several ways to start and stop recording audio and video. To save power, the STING II is automatically configured to close the video output 300 seconds (5 minutes) after beginning to record. After that time, although the unit continues to record, it will not automatically display what it is recording, even if connected to a television or monitor. This value can be changed in the conf.txt file.

The settings that determine what will be recorded are determined using the Setup or the Media Center applications. For more information, see [Setup Software](#).

File Types

Each time you start or stop recording, one of the following types of files will be created, depending on what settings you have selected prior to initiating the recording session).

File Extension	Type of File	Encryption Setting
.mpg	Audio/Video	Not encrypted
.mpx	Audio/Video	Encrypted
.m2v	Video only	Not encrypted
.m2x	Video only	Encrypted
.mp3	Audio only	Not encrypted
.m3x	Audio only	Encrypted
.jpg	Single image	Not encrypted
.jpx	Single image	Encrypted

You can select the type of recording session in the Setup software application (**Setup > Record > Recording Mode**).

This option enables you to select audio/video, video only, or MP3 audio only. Alternatively, you can create a .jpg by:

- Pressing the Image Capture button on the remote control.
- Pressing the right button on the STING II unit's control panel briefly (for less than 5 seconds).

- Pressing the button on the Vibrating Remote briefly (for less than 5 seconds).

Recording Methods

Once you determine the type of file you wish to record and configure these settings in the Setup, you only have to start and stop recording sessions using the STING II. There are several ways to start and stop recording sessions. These include:

- Via Vibrating Remote
- Via Infrard Remote Control
- Via the STING II unit's control panel
- Via Motion Sensor

Via Vibrating Remote

STING II comes with a vibrating remote device that enables you to quickly start and stop recording by simply pressing a button. The remote control is composed of a push-button and a cable connected to a vibrating motor. It can be used for:

- Starting and stopping the recording.
- Getting indications, by vibration, for low battery, low memory, a disconnected video cable and any other malfunction.

The STING II unit can be concealed completely, leaving only the camera and vibrating remote accessible to start and stop the recording session.

To start recording with the vibrating remote:

Press the button on the vibrating remote cable and hold it for 5 seconds until the remote control begins to vibrate. The remote will vibrate for a few seconds as an indication that the STING II is now recording. If you are viewing the STING II, you will also notice a blinking red light on the top of the device as a further indication that the device is recording.

To stop recording with the vibrating remote:

Press the button again and hold it for 5 seconds until it starts to vibrate. The remote will vibrate in three short pulses, indicating that the recording is off.



While the vibrating remote is attached to the STING II, all buttons on the STING II are not operational. This prevents you from accidentally starting or stopping a recording session accidentally. Only the button on the vibrating remote can start or stop a session while the cable is plugged into the STING II.

To take a still picture (a single .jpg file), press the vibrating remote button and release immediately. Each time you press the vibrating remote button for less than 2 seconds, another snapshot image will be taken by the camera and stored for later viewing.

WARNING A series of vibrations indicates that the STING II has approximately 2-5 minutes of recording time left because the battery is low and or memory card is full and needs to be recharged/replaced.

Via Infrared Remote Control

To start a recording session, you can use the STING II Infrared remote control to initiate a recording session by pressing the **REC** button on the top right corner of the device.

The red blinking light on the top of the STING II unit indicates that it is in record mode. Press the **Stop** button (square icon on lower left corner of black navigation panel) to stop the recording session via the remote control.

Via the STING II Control Buttons

Press the right button to begin recording. To record video and/or audio, hold the button down for 5 seconds. If you press the button for a shorter period of time, STING II will capture single-frame .jpg image files.

The red blinking light on the top of the STING II unit indicates that it is in record mode. Press the button again to stop the recording session.

Via Motion Sensor

STING II enables you to trigger recording sessions based on the detection of a moving object. Sensors trigger the recording session to begin and will automatically stop when no movement is detected for a predefined period of time. The default value is 30 seconds. For more information, see [Motion Detection](#) on page 23.

Alarm Indication

When the remote control cable vibrates continuously, this is an *alarm*. Press the remote control button to stop the vibration.

An alarm indicates one of the following:

- The camera cable has been disconnected (lost video-sync).
- The Microdrive card has been removed or dislodged.
- The STING II has suffered a severe malfunction and cannot continue recording.

To resume recording after an alarm indication:

1. Reconnect the camera cable and/or push the Microdrive card back in.
2. Turn the STING II off and on again using the On/Off button.
3. Press the remote control button once, and keep it pressed for about two seconds, to start recording again.

Setup Software

The STING II contains a built-in software application that enables you to manage the device, view all files, view system information, and modify STING II recording settings and options.

The STING II software contains three main options:

- **Event** – enables you to access files stored on the Microdrive.
- **Setup** – enables you to set and modify system settings.
- **System Information** – enables you to set and modify system information options such as date and time used to stamp all recording sessions.

Accessing the Setup Software

You can access the Setup software either by using the STING II's joystick control buttons or by using the remote control. For information on how to connect the unit, see [Connecting and Configuring the STING II](#).

To access the Setup main menu from the STING II controls:

- Press the center joystick button on the unit.

To access the Setup main menu using the remote control:

- Press the **Menu** button.

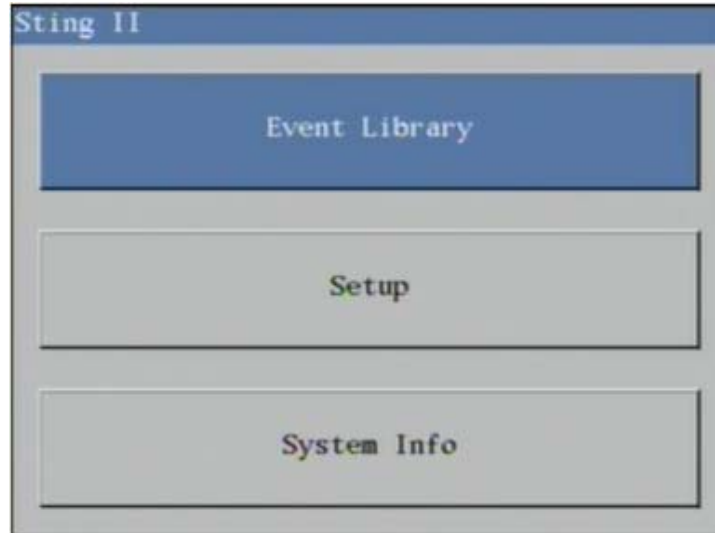
Setup Main Menu

The main menu of the STING II Setup application contains three options:

- Event Library
- Setup
- System Info

Event Library

The Event Library window contains a complete list of all files currently saved on the Microdrive. The files are listed in date order according to the date and time the file was recorded. Below the list of files is an indication of how many pages of files are listed in the Event Library, and the currently displayed page number (for example, Page 1 of 3).



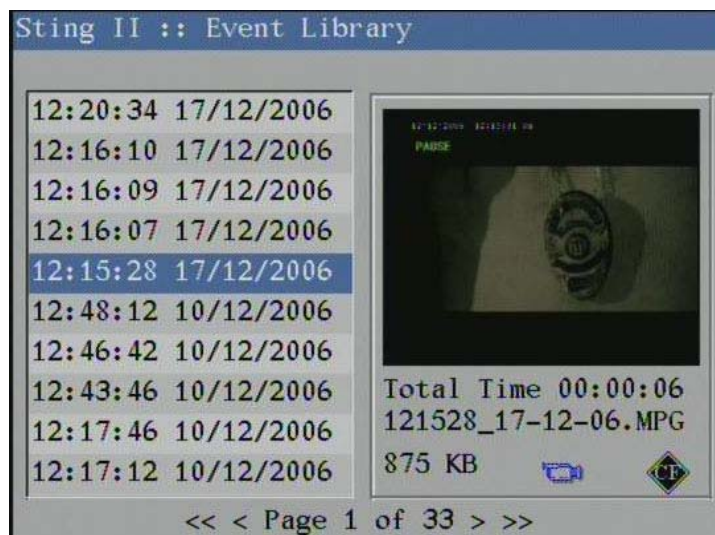
The initial frame of the selected clip is displayed in the Preview window on the right side of the Setup. Details of the clip, including the total amount of time and the size of the file are displayed directly below the Preview window. File names are automatically assigned to each file that is created by the STING II.

Viewing Files

When viewing a .jpg file, the image itself is displayed in the Preview window, rather than the first frame of a video clip.

To view the files in the Event Library:

1. Using the Remote Control, press the **MENU** key once to access the Setup.
2. Press **ENTER** to open the Event Library. You will see a list of files on the left side of the window.



3. Use the **UP** and **DOWN** keys on the STING II remote control to navigate through the files on the page. To move to another page, use the **LEFT** and **RIGHT** keys. Navigate to the file you wish to view. Alternatively, press on the fast forward (single >) to jump a single page, or >> to jump forward 10 pages. Press backwards (single <) to jump a single page or << to jump back 10 pages.



You can see the first frame of the file in the display window on the right side.

4. Click **ENTER** to access the Event Library menu.
5. On the menu, use the **UP** and **DOWN** keys to navigate. In this case, select **PLAY** and press **ENTER**.



To return to the main menu, click **Menu**.

Deleting One or More Files

You can delete one file or all files from the Event Library.

To delete one or more files:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **ENTER** to open the Event Library. You will see a list of files on the left side of the window.
3. You can use the **UP** and **DOWN** keys on the STING II remote control to navigate through the files on the displayed page. To move to another page, use the **LEFT** and **RIGHT** keys. Navigate to the file you wish to verify.
4. Click **ENTER** to access the Event Library menu.
5. On the menu, use the **UP** and **DOWN** keys to navigate. In this case:
 - Select **Delete** to delete the currently highlighted file.
 - Select **Delete All** to delete all files currently stored in the Event Library.

You will be prompted to confirm that you wish to delete one or all of the files. Click **ENTER** to proceed.

Encrypted Files

STING II has the ability to encrypt files for added security. The Encryption option ensures that only authenticated viewers can see the files. Encrypted files can only be decrypted by the STING II Media Center.

You cannot open an encrypted file via the Setup application or in any other graphics viewer. To view these files, you must connect the STING II to a

computer running the STING II Media Center application. For more information, see [Decrypting and Viewing Files](#) on page 41.

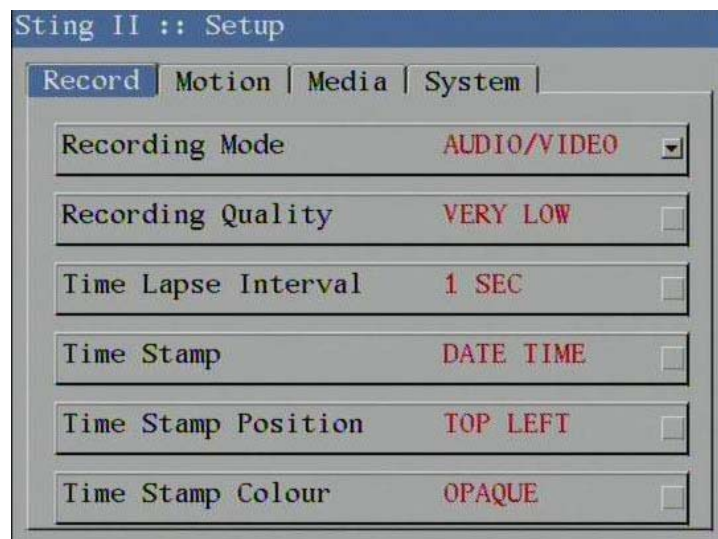


For added security protection, all encrypted files must be decrypted using the STING II Media Center.

Setup

The Setup menu enables you to define the recording configuration of the STING II during operation, set the time and date details (if needed), and much more. When you select the Setup option, the Setup software displays the following tabs:

- Record
- Motion
- Media
- System



Record Tab

The Record tab of the Setup software enables you to select the recording mode, for example whether you will be recording audio and video, only video, etc. It also enables you to determine if a time date stamp will be used, and if so, its format, positioning and color. The current value is displayed in red next to each option. The Record tab contains the following options:

- Recording Mode
- Recording Quality
- Time Lapse Interval
- Time Date
- Time Date Position
- Time Date Colour

Recording Mode

The Recording Mode option enables you to set the STING II recording operations. Each time you activate the STING II, it will operate according to this setting until it is again modified in the Setup software. The default value is AUDIO/VIDEO.



To set or change the recording mode:

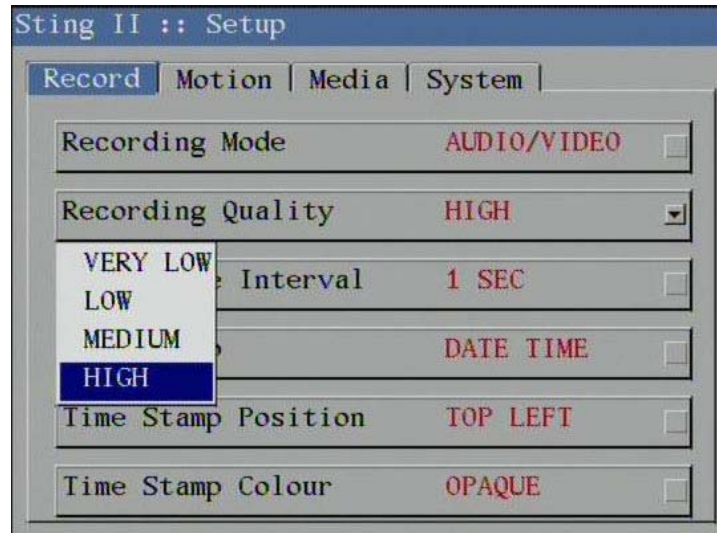
1. Using the Infrared Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Use the **DOWN** key again to navigate to the Recording Mode option and press **ENTER**. If you wish to change the recording mode, press **DOWN** to select an option, then press **ENTER**.

Select one of the following:

- **Time Lapse:** Select this option to record a single frame according to specific intervals. The Time Lapse Interval is set on the Recording Mode tab as well (see [Time Lapse Interval](#) below).
- **Audio/Video:** Select this mode to record standard audio/visual clips.
- **Video:** Select this mode to record video only (no sound is recorded).
- **MP3 Audio:** Select this mode to audio video only (no visual images are recorded). If you do not have a camera connected to the device and you do not select this option, the STING II will not record anything.
- **Low Frame Rate:** Select this option to record 10 frames per second (typical is 25-30 frames per second).
- **Night A/V:** Select this option to optimize the record settings for recording at night.

Recording Quality

The Recording Quality option sets the quality level of the images or video clips being recorded. The current value is displayed in red on the button. The default value is **Medium**. The higher the quality, the more disk space will be used to store the file.



To set or change the recording quality:

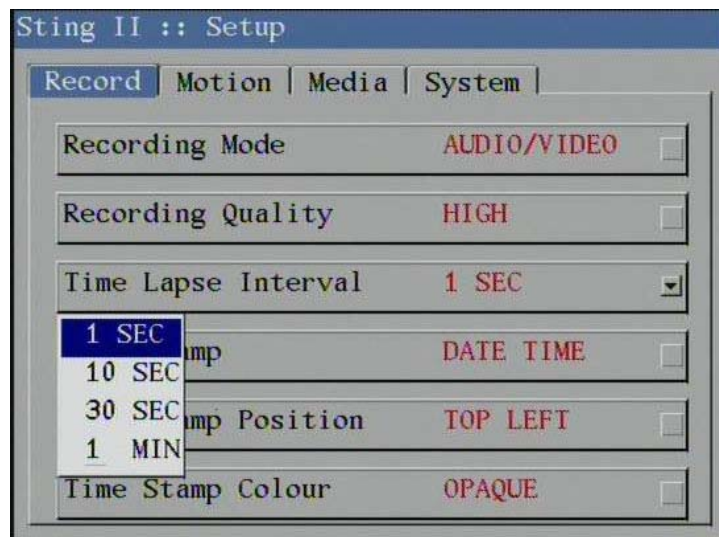
1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Use the **DOWN** key again to navigate to the Recording Quality option and then press **Enter**. If you wish to change the recording quality,

press **DOWN** to select an option, then press **ENTER**. Select one of the following:

- Very Low
- Low
- Medium
- High

Time Lapse Interval

You can the Time Lapse option to set STING II to record a single image at preset intervals. The default value is **10 SEC**. While you set the option to capture video in the Recording Mode, the interval itself is set in the Time Lapse Interval option.



To set the time lapse interval:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Use the **DOWN** key again to navigate to the Time Lapse Interval option and then press **Enter**. Select one of the following:
 - 1 second
 - 10 seconds
 - 30 seconds
 - 1 minute

Time Date Stamp

You have the option of having every file (still image or video) stamped with a Time Date stamp indicating the time or date and time of the recording.

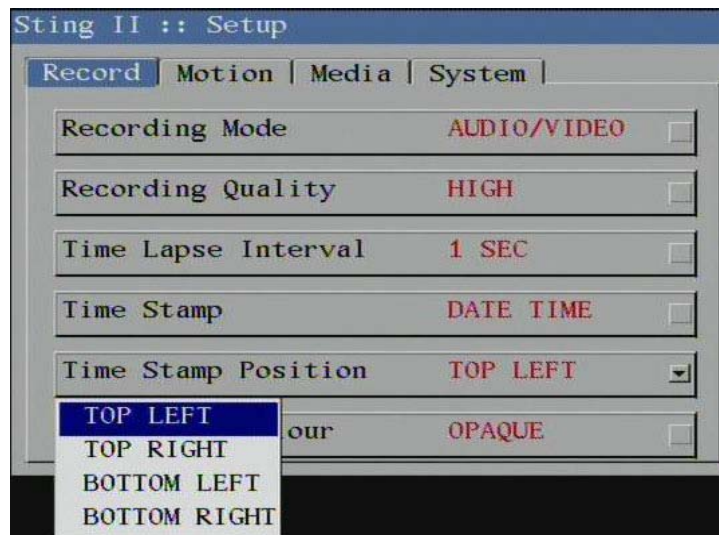
The default value is **DATE TIME**, indicating that both the current date and time will be stamped and visible in each file.

To set or modify the Time Stamp:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Use the **DOWN** key again to navigate to the Time Date Stamp option and then press **Enter**.
Select one of the following:
 - NONE
 - DATE TIME
 - TIME

Time Date Stamp Position

You can select the location that the time Date stamp is displayed in the picture of video recording using the Time Stamp Position option. The default value is **TOP LEFT**.



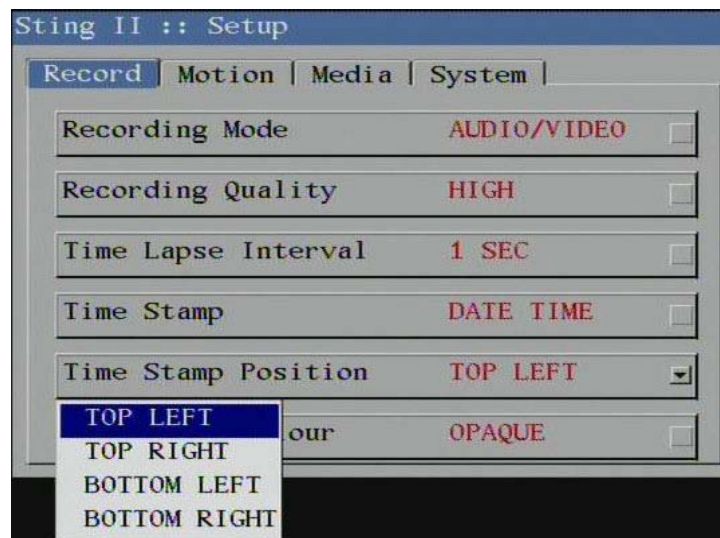
To set or modify the Time Stamp Position:

1. Using the Remote Control, press the **ENTER** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Use the **DOWN** key again to navigate to the Time Stamp Position option and then press **Enter**. Select one of the following:
 - Top left
 - Top right

- Bottom left
- Bottom right

Time Date Stamp Colour

You can set the color that the time stamp appears on the image or video. The default value is **Transparent White**.



To set or modify the Time Date Stamp Colour:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Use the **DOWN** key again to navigate to the Time Stamp Colour option and then press **Enter**. Use the **DOWN** key to navigate to the preferred option:
 - Opaque
 - Transparent White
 - Transparent Black
4. Press **ENTER** to apply your selection.

Motion Tab

STING II can be activated automatically when motion is detected in the recording area. You can set the noise, size and speed sensitivity to filter out insignificant data.

When enabled, the STING II will record for 30 seconds following any movement within the target area (according to the sensitivity settings specified in the configuration).

The current value is displayed in red next to each option. The Motion tab contains the following options:

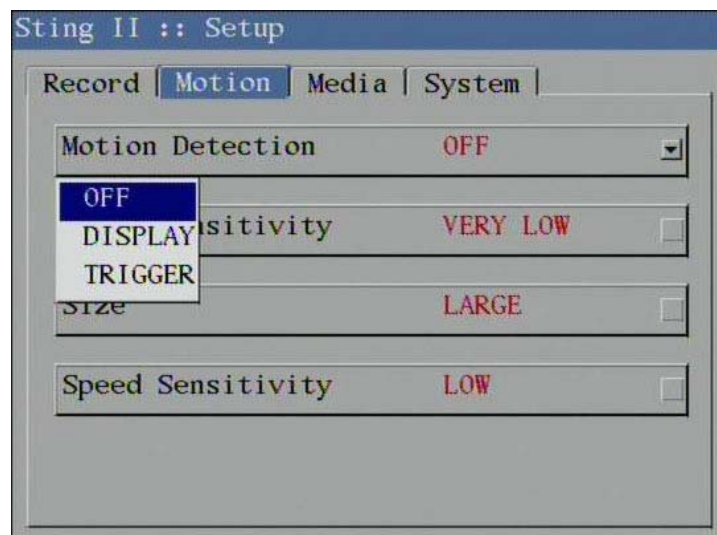
- Motion Detection
- Noise Sensitivity
- Size
- Speed Sensitivity

Motion Detection

There are three options related to the Motion Detection capabilities of the STING II:

Option	Description
Off	Motion Detection is not activated. The unit will only begin recording when activated manually.
Display	Motion detection is activated on this display. A red grid indicates where motion has been detected.
Trigger	Motion detection is activated each time movement is detected in the designated area and a recording session is triggered. If no movement is detected in the area under observation for 30 seconds, the unit will stop recording until movement is again detected.

By default, the STING II's Motion Detection is set to off, meaning that the unit is not triggered to record based on motion.

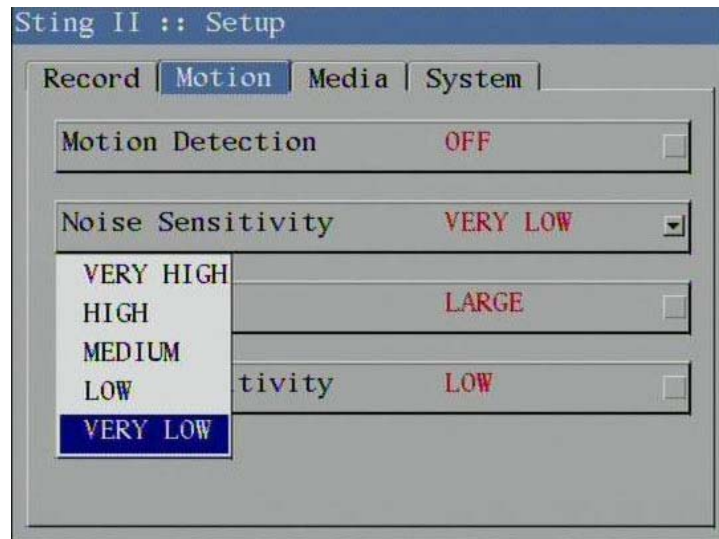


To set the level of motion detection:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Press **RIGHT** to navigate to the Motion tab.
4. Press **ENTER** to see the possible Motion Detection options.
5. Select one of the following: Off, Display, or Trigger

Noise Sensitivity

The Noise Sensitivity option enables you to set the level of acceptable movement (or noise) that would trigger a recording session.



Options include:

- Very High
- High
- Medium
- Low
- Very Low

The default value is **MEDIUM**.

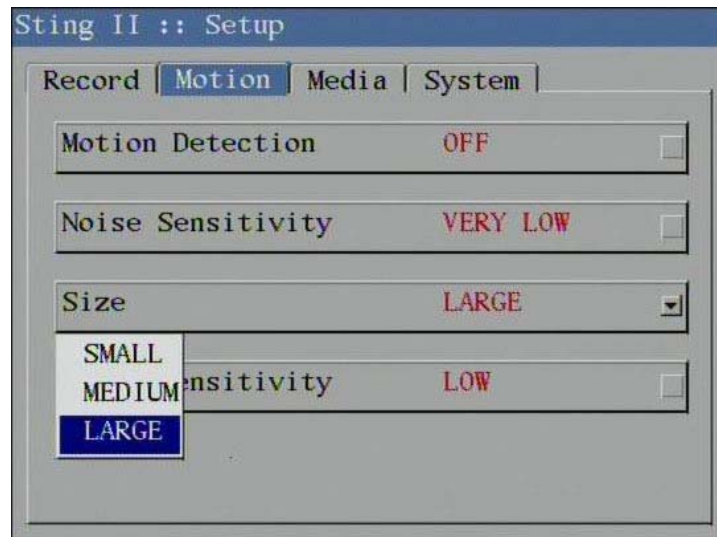
To set the noise sensitivity level:

1. Using the Infrared Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Press **RIGHT** to navigate to the Motion tab.

4. Use the **UP/DOWN** keys to navigate to the Noise Sensitivity option and select one of the options.

Size

The Size option indicates the size of the options that should be detected by the motion detector.



Options include:

- Small
- Medium
- Large

The default value is **MEDIUM**.

To set the size level:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Press **RIGHT** to navigate to the Motion tab.
4. Use the **UP/DOWN** keys to navigate to the Size option and select one of the options.

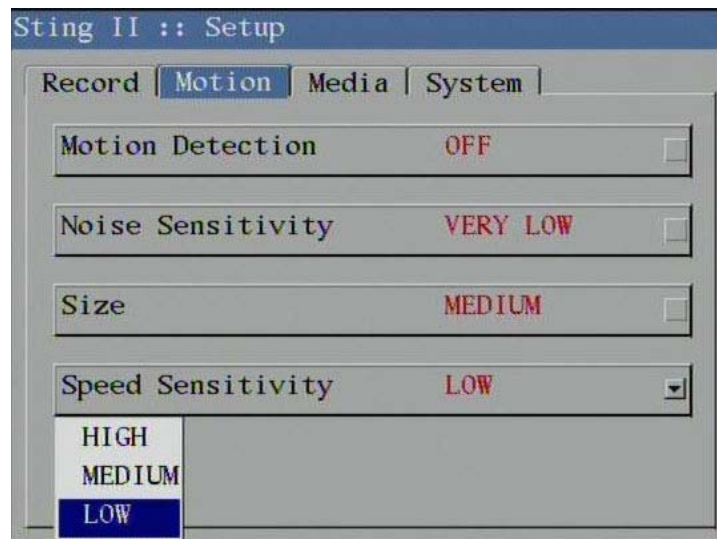
Speed Sensitivity

The Speed Sensitivity option indicates what speed an object must move in order to trigger a recording session.

Options include:

- High
- Medium
- Low

The default value is **MEDIUM**.

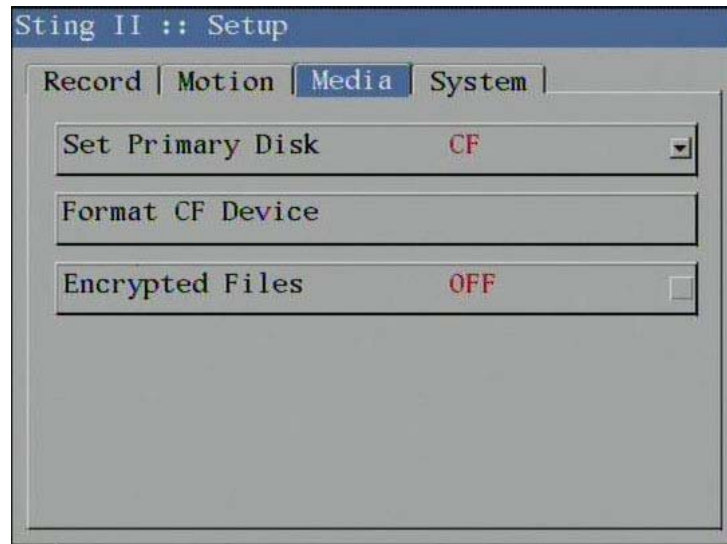


To set the speed sensitivity level:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Press **RIGHT** to navigate to the Motion tab.
4. Use the **UP/DOWN** keys to navigate to the Speed Sensitivity option and select one of the options.

Media Tab

The Media tab enables you to select various options related to where STING II stores recorded files.

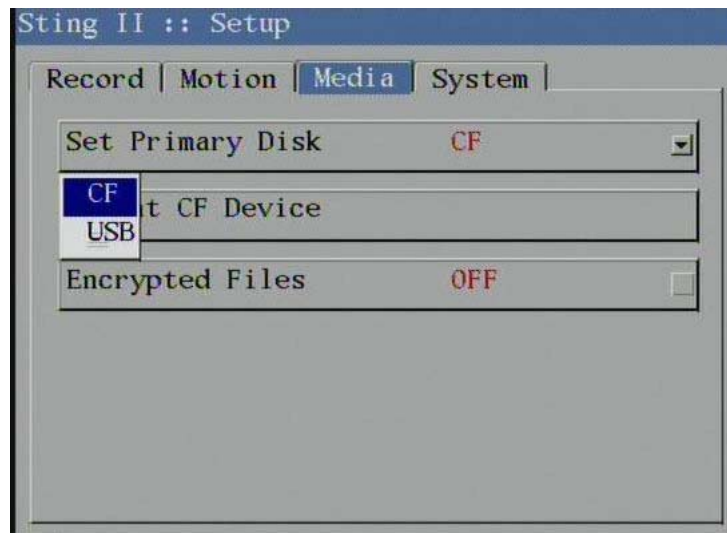


Options on this tab include:

- Set Primary Disk
- Format Primary Disk
- Encrypted Files

Set Primary Disk

You can save files that are stored on the STING II to one of two primary disk options: Microdrive/Compact Flash plug-in cards or External USB hard drive.





Note: If you choose USB and then connect a compact flash, STING II will record on the compact flash. Similarly, if you mistakenly select compact flash and then connect a USB device, the STING II will still record to the USB.

To select the primary drive:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Press **RIGHT** to navigate to the Media tab.
4. Press **ENTER** to view the options for the Set Primary Disk. Select **CF** (for Microdrive/Compact Flash) or **USB**.

Format Primary Disk

If you wish to format or reformat the Primary Disk, you can use the Format Primary Disk option.

WARNING: Formatting the primary disk will erase the current contents of the disk.

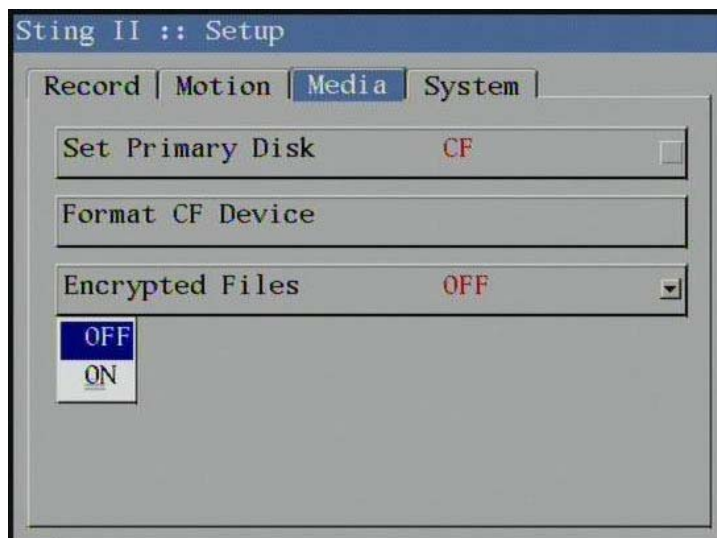
To format or reformat the disk:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Press **RIGHT** to navigate to the Media tab.
4. Navigate to the Format Primary Disk option. You are asked to confirm your selection. Click **ENTER** to format the primary disk, or use the **RIGHT** key to move to Cancel (then click **ENTER** to cancel).

Encrypted Files

STING II can encrypt all files so you can make sure no one but you or the person that has the password can view the recorded files. Encrypted files can only be decrypted with a password (set in the STING II Media Center) from within the STING II Media Center.

WARNING: If you forget the password, it is impossible to decrypt and view the files.



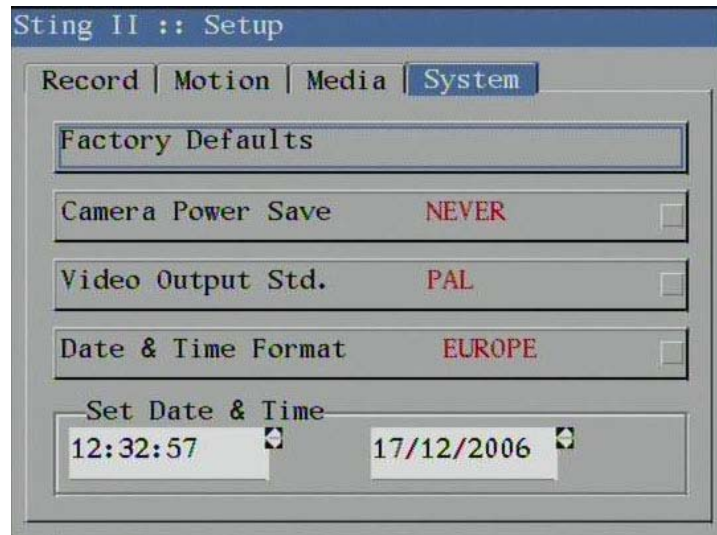
To enable encryption of files:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **DOWN** to highlight the Setup option and press **ENTER** to access the Setup window.
3. Press **RIGHT** to navigate to the Media tab.
4. Press **ENTER** to navigate to the Encrypted Files option.
5. Select either **ON** or **OFF**. The default value is **OFF**.

System Tab

The System tab of the Setup menu enables you to:

- Return the STING II to the factory default settings originally programmed into the unit.
- Set the camera power save mode.
- Specify the date and time format to be used as a date stamp on all files.
- Set the current date and time (this is the time that will be used in the date/time stamp).

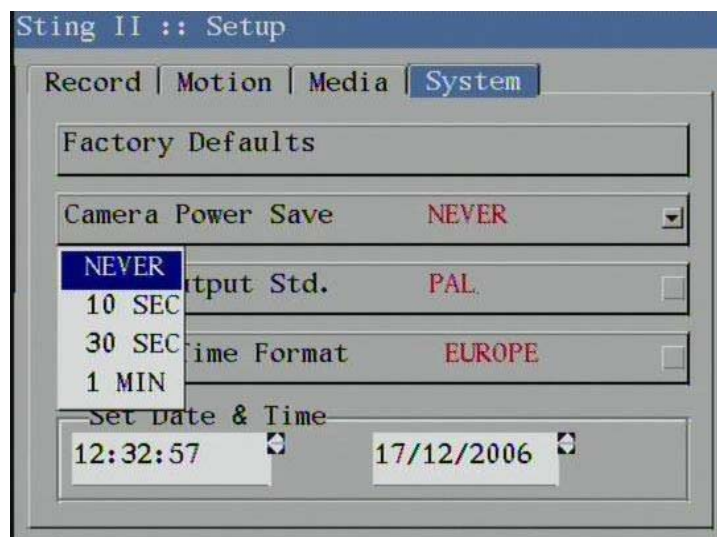


Factory Defaults

Select **Factory Defaults** to return the STING II configuration settings to the original factory-set options. You are prompted to confirm your selection. Click **OK** to reset the STING II configuration settings, or **Cancel** to close the message box without changing the current settings.

Camera Power Save

Automatic power-save mode can be configured for the STING II using the **Camera Power Save** option. This means that the camera will go into power-save mode when the camera is not being used for a specified period of time (ranging from 10 seconds to never). The options are: Never; 10 sec.; 30 sec.; or 1 minute. The default value is 10 sec. The **Camera Power Save** mode will only be activated when you are not in record mode.



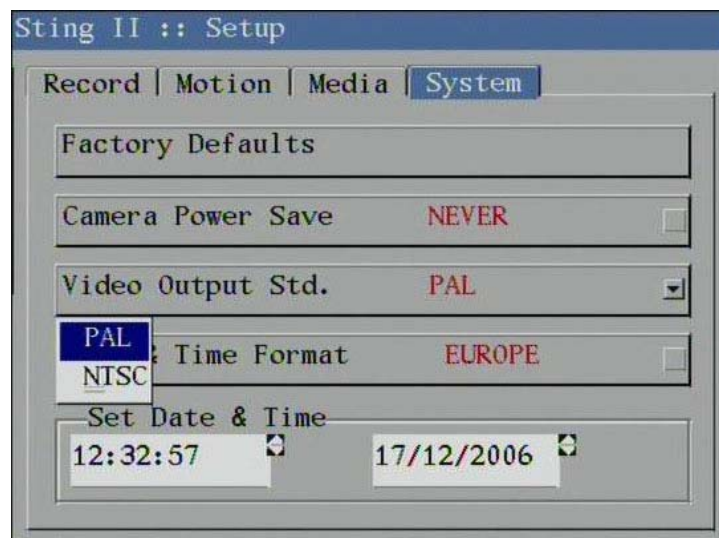
Typically, you will use the NEVER setting to enable you to position the camera in cases where you want to perform surveillance from a fixed location. Once the camera is in position and you change the setting, the STING II is programmed to automatically continue giving power to 5-volt connection while the camera is in record mode.

As soon as you next indicate that you want to record, power to the 5-volt connection (and to the external camera) is immediately activated. When you stop recording, the power-save mode will begin after the specified period of time (or never, if you selected NEVER).

Video Output Std.

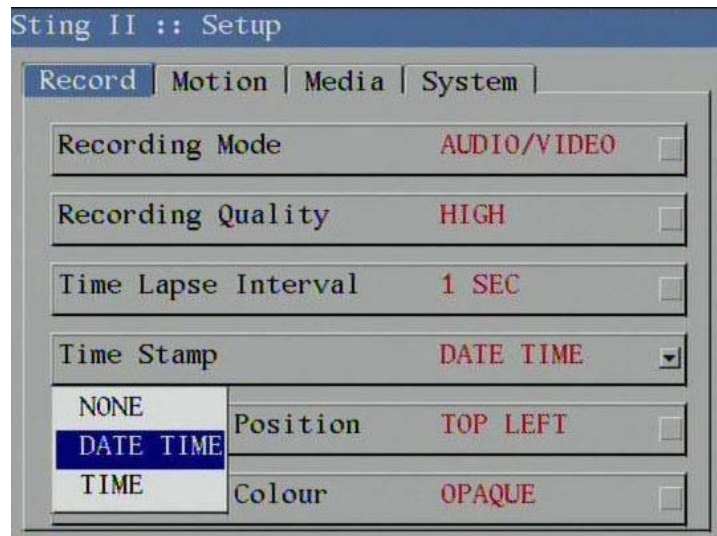
You can set the video output according to one of the following standards:

- PAL
- NTSC



Date and Time Format

Set the date and time format.



Options are:

- US format
- US military format
- European format

System Info Tab

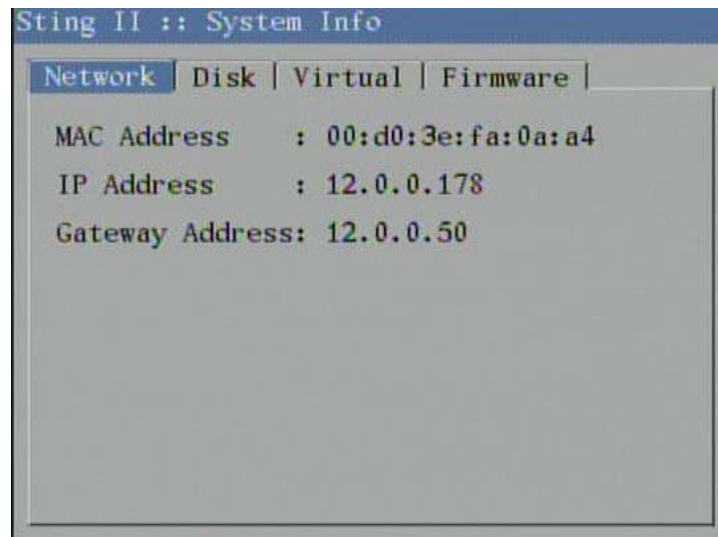
The System Info menu is read-only. It is intended to offer you information on the following options:

- Network
- Disk
- Virtual
- Firmware

Network

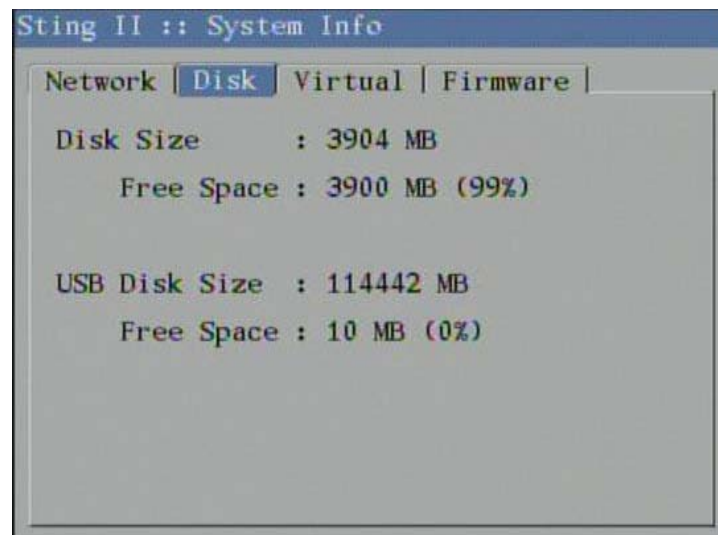
The Network tab details the STING II's:

- MAC Address
- IP Address
- Gateway Address



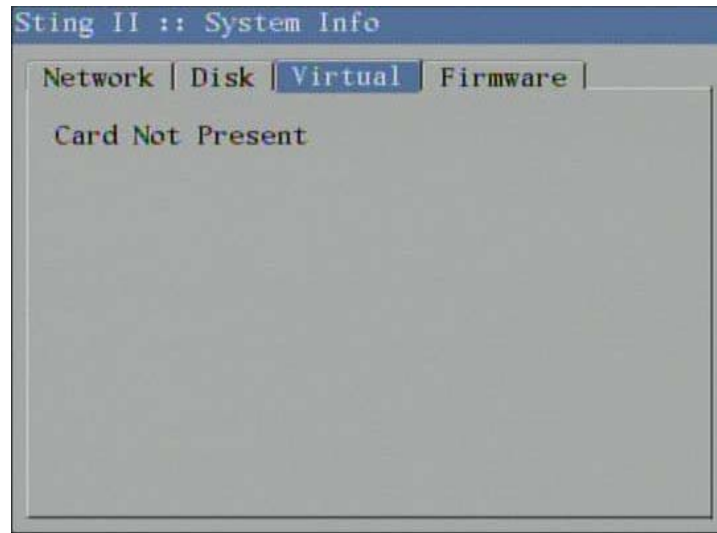
Disk

The Disk tab details information about the current disk connected to the STING II, its total size and the amount of free space available.



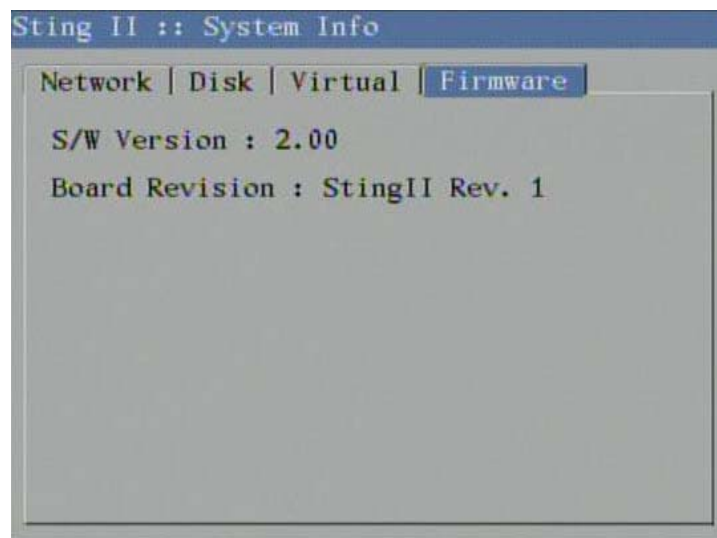
Virtual

If a virtual adaptor is connected, information about its current status will be detailed on the Virtual tab.



Firmware

The current software and hardware version of the STING II is detailed on the Firmware tab.



For information on updating the Firmware, see [Updating the STING II](#).

Default Settings

The following values configured in the STING II when originally shipped, and are reassigned when you click Factory Defaults on the System tab.

Setting	Default Value
Record Mode	Audio/video
Record Quality	High (5Mbps)
Time Lapse Interval	10 seconds
Time position	Top left: <ul style="list-style-type: none">• X – 64• Y Pal - 30• Y NTSC - 30 in pixels
Time Stamp Colour	Opaque
Motion Detection	OFF
Noise Sensitivity	Medium
Size	Medium
Speed Sensitivity	High
VMD Record Time	30 seconds
Primary Disk	CF
Encrypted Files	NO
Camera Power Save	10 seconds
Screen Saver	300 seconds
Video Output Std.	NTSC
Date & Time Format	US
File Maximum Size	4093 MB

Updating the STING II

Occasionally, the STING II software is updated. These updates are available without charge by connecting the STING II and downloading the new version. There are several options for upgrading.

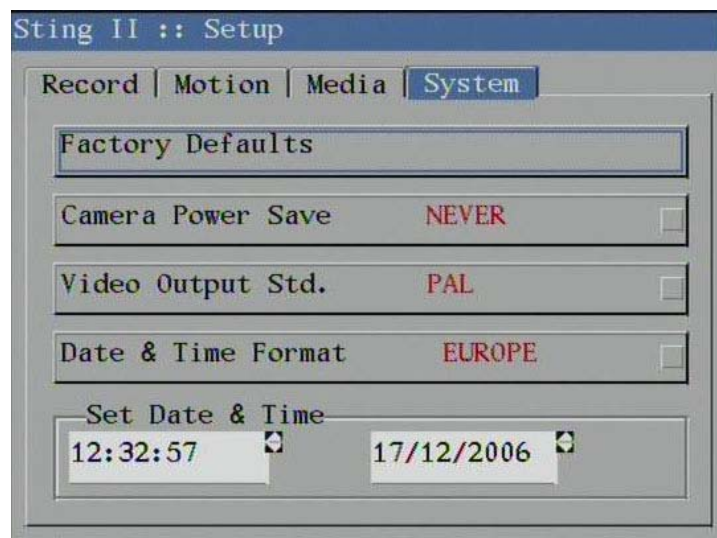
To upgrade the STING II firmware:

1. Download the file from the Internet and save the file to the STING II's memory card.
2. Insert the memory card into the STING II, while the STING II is turned **Off**.

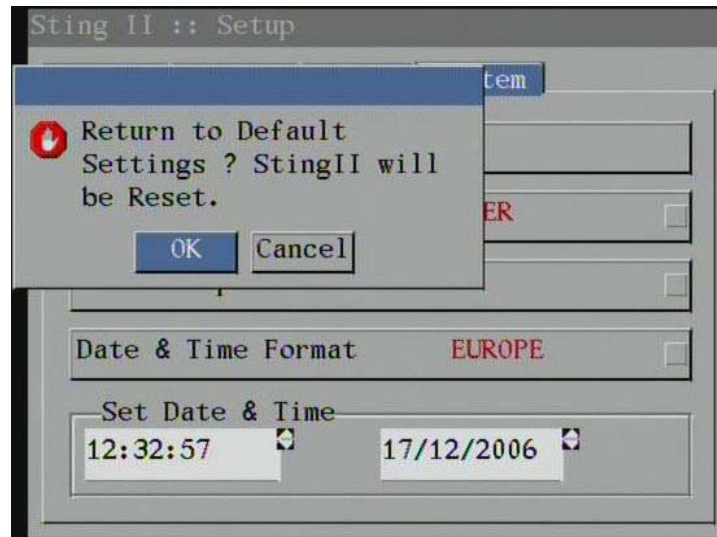
When you turn the STING II On, the red and green lights will flash, indicating that the unit is in the process of being updated. This process will take about three minutes and it is important not to interrupt the STING II while it is the process of upgrading. When the LEDs stop flashing, the top light should be green, indicating a successful upgrade.

If the second light is red, or any other color but green, this may indicate that you are low on disk space and may need to delete some or all of the files before starting another recording session. If both lights are green, you are ready to use the STING II with the latest available software.

Note: After upgrading the software, it is recommended that you click **Factory Defaults** on the Systems tab.



You are asked to confirm your selection. Click **OK** to reset the settings to the factory defaults, or **Cancel** to close the dialog box without changing the current configuration.



Using the Remote Control

The Sting Remote Control offers the following options:



Opens the Setup main menu.



REC: begins a recording session.



For future use.



When in **Camera Power Save** mode (see [Camera Power Save](#) on page 30), this button diverts power to the 5-volt connection for the specified period of time (10 sec, 30 sec, or 1 min.).

When you are viewing the Setup menu, this button also performs as a Back button, returning to the previous option or view.



Navigation panel to move through the menu. Select **Enter** to confirm your selection.



Image Capture button initiates the STING II to capture a single frame image and save it in jpg format when viewing a play back video.



Using the STING II Media Center

The STING II Media Center is a software program that communicates with your STING II, and enables you to preview, upload and delete recordings. It also enables you to decrypt files that were encrypted during a STING II recording session.



The main window of the STING II Media Center is divided into two main sections:

File Browser area: enables you to view all the files currently on the Sting (or browse through your computer to view files that were previously recorded and saved to another location), extract a single frame from within a video file, etc.

STING II configuration area: enables you to set the video quality and encryption password that is used by the STING II, and view system messages.

Installing the STING II Media Center

The STING II Media Center is included on the product CD shipped with each unit. To install the Media Center, double-click on StingII.exe. The STING II Media Center will open.

Accessing the STING Media Center

1. Click the program's desktop icon, or click the **Start** button and select **Programs > STING > STING Media Center**.

If the STING II unit is already connected to the computer when you open the STING II Media Center, "Found Sting Media" will be displayed in the upper right corner of the window.



STING II Tab Options

About: Enables you to determine what version of the Sting Media Center you are using.

Help: Enables you to access the application's online help, offering information and instructions on working with STING II.

Exit: Closes the Media Center.



File Browser Area

The File Browser area displays a list of files that are currently stored on the Sting. Once the STING II is connected (typically via USB cable) to the computer on which the STING II Media Center has been installed, click **Show Files** to update the display.




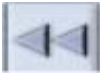



On the left side of the screen, the file name, creating date and time, and the file size are displayed for each file. You can use your mouse to navigate through the list.

To delete files via the Media Center:

Highlight one or more files and click **Delete Files**. You are prompted to confirm your request before the file or files are deleted.

To preview a file:

Click on the file on the left side of the screen. The first frame will be automatically displayed in the Preview Pane. You can use the media controls to navigate through the file:

	Pause the display.
	Review/reverse the direction of the display.
	Continue displaying the current file.
	Fast forward through the file.
	Adjust the sound/volume of the file.

Security Options in the Media Center

You can configure STING II to encrypt files during the recording session. If you choose this option in the Setup (see [Encrypted Files](#) on page 29), you should set a password that can authorize the decrypting of files to be viewed. The password is created in the Media Center (see [Creating an Encryption Password](#) on page 43). You can also set the Video Quality that is used during recording.

Once files have been recorded, the STING II Media Center is the **ONLY** software that enables you to decrypt them so that they can be viewed.

Decrypting Files

When you decrypt a file, it is copied to another location and “unlocked.” This means that the original file is still encrypted and remains unedited. The decrypted file can then be viewed in the STING II Media Center or any other MP2-compatible viewer.

To decrypt a file:

1. Select a file from the File Browser list.
3. Click **Decrypt**. When prompted, confirm that you wish to decrypt the file.

Verifying the Authenticity of Files and Images (Watermark)

The STING II automatically includes Watermarked Files

To verify that files have not been tampered or edited:

1. Using the Remote Control, press the **MENU** key once to access the Setup software.
2. Press **ENTER** to open the Event Library. You will see a list of files on the left side of the window.
3. You can use the **UP** and **DOWN** keys on the STING II remote control to navigate through the files on the displayed page. To move to another page, use the **LEFT** and **RIGHT** keys. Navigate to the file you wish to verify.
4. Click **ENTER** to access the Event Library menu.
5. On the menu, use the UP and DOWN keys to navigate. In this case, select **VERIFY** and press **ENTER**. If the original file was edited in any way, you will see on the System Messages area: "File is not original!!!!!!"

Configuration Options in the Media Center

Configuration options in the Media Center include:

- Setting the video quality
- Viewing any system messages related to actions in the Media Center
- Selecting a recording setting
- Assigning a password
- Viewing the current firmware version



Video Quality

The current video quality of each recording session is configured in the Media Center in the Video Quality section. Select from High, Medium, Low or Very Low. In general, the higher the quality setting, the larger the file will be.

If there is no storage problem, you may choose to set the video quality at a higher level. On the other hand, if space on the compact disk may be a problem, you may choose to record at a lower quality and thus be able to record for a longer period of time.



To set the video quality:

1. Select an option from the list of possible video quality levels.
2. Click **Set Video Quality**.

System Messages

This is a read-only field that displays system messages as appropriate.

Record Settings

In the **Record Settings** section, you can enable the Record Settings for the STING II. The STING II can be configured to encrypt all files created during a recording session (still images, video, or audio), by enabling the **Encryption** radio button.

In addition to the Encryption setting, you can select one of the following record settings:

- **Audio/Video**
- **Video only**
- **Audio only**

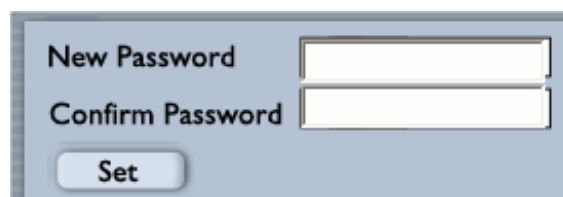


Click **Set** after you select your preferences.

Creating an Encryption Password

If you choose to encrypt recording sessions, you will need to first create a password that the STING II will use to protect the files. You can only decrypt files if you have this password. If for any reason you lose (or forget) the password, it will be impossible to open the file.

Note: The default password is: *Sting*



To set a password:

The STING II needs to be connected via the USB in order to access the STING II Media Center to create or change the password.

1. Enter the new password in the **New Password** field of the STING II Media Center.
2. In the **Confirm Password** field, enter the exact password again.
3. Click **Set Password** to save the password.

After you set the password and click **Set Password**, you need to shut off the Sting and then turn it back on again so that the new password will take effect.

Firmware Version

You can check what Firmware version is installed on the STING II by connecting the Sting via the USB cable to your computer and opening the STING II Media Center. Click **Firmware Version**. The version number will be displayed.

The firmware file name is sys.bif. Typically, a standard upgrade will take at least 7 minutes. A progress bar is displayed in the browser, indicating the progress of the upgrade process. You should not disconnect the STING II until the upgrade process is completed.



Remote Access

Using a web interface option and a standard Internet browser (such as Microsoft Internet Explorer), you can access the files currently stored on a STING II unit located at a remote location. Files can be viewed and saved locally. You can also control the recording process in the STING II to remotely initiate a recording session.

To establish remote access, you must first determine the IP address of the STING II. Once you know the IP address, you can access the STING II remotely from any computer with Internet access or locally through the Ethernet/RJ-45 connections.

Determining the STING II's IP Address

The STING II is assigned an IP address when it is connected to the router and communication is established. This IP address is then used by the remote Web Interface to enable you to access and control the STING II remotely.

To determine the STING II address:

1. Connect the STING II to the router and to a TV/Monitor and turn the STING II **On**.
2. Although the process of configuring your router may vary slightly depending on the router, the basic procedure involves accessing the setup page (for example, with Linksys, open Internet Explorer and type <http://192.168.1.1> in the address field).
3. On the main setup page, enter the Static IP address found on the Setup's Main Menu > Systems Info > Network tab.
4. When setting up the STING II to allow remote access over the Internet, you will need to configure the Port Forwarding on your router.

This can be accomplished either by setting the Specific Port Forwarding option or the DMZ host. For specific details, see your router documentation.

5. If you wish to accomplish this via port forwarding, you should define the ports as follows: ports 80 (web) and 21 (ftp).
6. Disable any firewall option on these ports in the router to enable remote connection.



If the MAC address appears as all zeros, this indicates that there is not Ethernet connectivity between the STING II and the router. Check the connections and then verify the MAC address again.

Some routers may require a crossed cable to enable successful communication with the STING II.

Once connectivity is established, the login screen appears.

Logging In

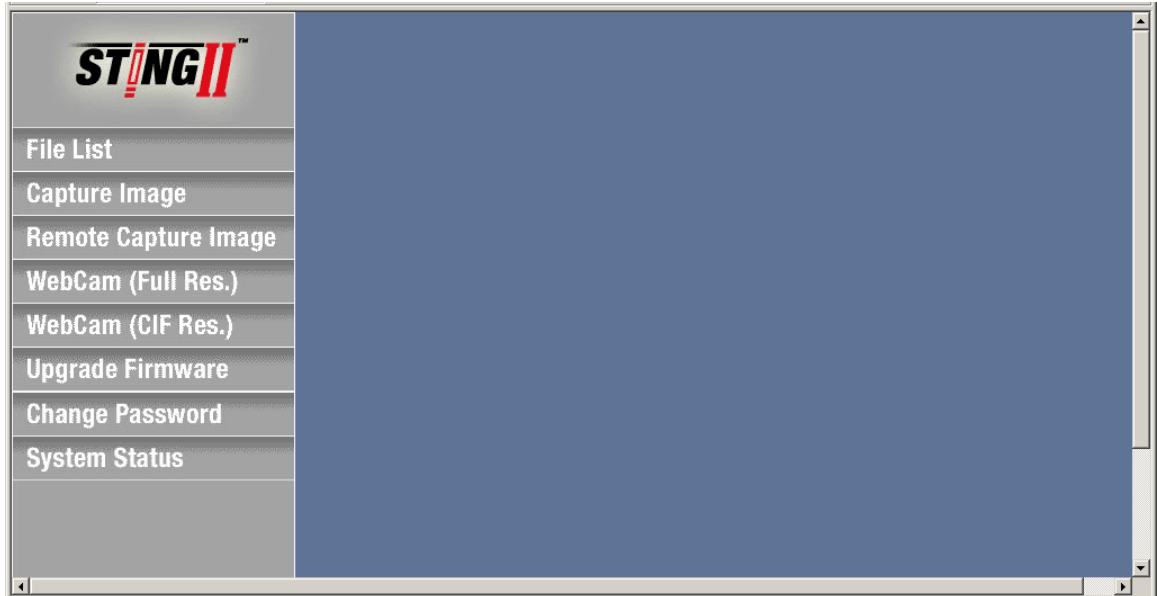
To log in:

Once you have established a local or remote connection, the login screen appears.



Enter the user name and password and click **OK** to enter the remote access Web interface.

By default, the STING II user name and password are both "admin." These can and should be changed either in the STING II Media Center or via the Setup settings. Once you complete the login process, the STING II Web Interface window opens.



On the left side, the menu details all of the available options. On the right side, a Preview window enables you to view previously recorded sessions, capture current images, display the current view of the connected camera live, and more. The options on the web interface include:

- File list
- Capture Image
- Remote Capture Image
- WebCam (CIF resolution)
- WebCam (Full resolution)
- Change Password
- System Status

File List

Click **File List** to display a list of all files currently stored on the STING II. The file name, date the file was created, and the file size are displayed. You can click on a file to download it to the local computer.

Capture Image

Select **Capture Image** to view a single frame image of the camera's current view. The image will be displayed in the Preview window. The image is displayed with the current date and time stamp.

Remote Capture Image

Select **Remote Capture Image** to view a single frame image of the camera's current view and also save that view to a .jpg graphics file for viewing at a later time. The image is displayed (and saved) with the current date and time stamp.

WebCam (Full resolution)

Select **WebCam (Full resolution)** to display the current camera view in real time (one frame per second). The view is displayed in the full area of the Preview window. The display is updated every few seconds.

WebCam (CIF resolution)

Select **WebCam (CIF resolution)** to display the current camera view in real time. The view is displayed in a portion of the Preview window and is updated every few seconds. Because it only uses a portion of the Preview window, it uses fewer resources to update the image and therefore displays more images in a shorter period of time.

Upgrade Firmware

You can upgrade the firmware on the STING II either via a USB connection with the STING II directly, or via an Ethernet connection and the Internet. Connect to the STING II via the remote Web interface and click **Upgrade Firmware** to access and upload a new version.

Change Password

You can change the STING II password used for encryption via the Web interface by selecting **Change Password** and then entering the following the current password and then a new password (between 2 and 8 characters). You must then re-enter the new password in the **Confirm New Password** field. Click **OK** to change the password.

System Status

Select System Status to display the following information (read-only):

- **Software version:** the current version number installed on the STING II.
- **Board revision:** the current version of the STING II Board.
- **Compact flash status:** total space and percentage available.
- **USB disk presence** (or None).
- **Video Status** (NTSC or PAL)
- **Recording:** whether the unit is currently recording or not
- **Motion Detection:** what setting is currently in effect for the motion detection setting

Maintenance and Troubleshooting

Caring for the STING II

The STING II does not require special maintenance. Keep the unit away from moisture, dirt or excessive heat. Clean with a damp cloth and wipe dry.

Do not use Acetone, Benzene or any other alcoholic agents when cleaning the unit.



Do not use Acetone, Benzene or any other alcoholic agents when cleaning the unit.

Unit Does Not Turn On

Probable Cause	Corrective Action
Dead or Uncharged Battery	Charge the battery. If the problem persists send the unit in for service.

Cannot Start Recording

Probable Cause	Corrective Action
A/V cable disconnected.	Check the connections to
No sync signal detected.	
No Microdrive detected.	Check that the Microdrive is seated correctly.

Technical Specifications

Physical

Dimensions	92 mm x 60 mm x 25 mm (3.62" x 2.36" x 0.98")
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Power

Internal Battery	3.6 Volts
External Charger	Universal input: 90-264VAC Wall charger
Camera Power Source	5 Volts 200mA

Audio/Video

Video Format	MPEG-2.
Video Input	PAL/NTSC standard composite video.
Video Output	
Video/Audio Playback	Any MPEG-2 compatible player. (e.g. Windows Media Player or Winamp)

Miscellaneous

PC Interfaces	USB (1.1 or 2.0) or Ethernet
----------------------	------------------------------

About ESP

Electronic Security Products, Inc. (ESP) is an internationally-based manufacturer of high technology video surveillance equipment. The company is comprised of engineers and technicians who specialize in investigative tools and all aspects of investigative photography.

Established in 1993 and headquartered in New York, ESP has been the choice manufacturer and supplier of high quality video surveillance products for over a decade. The company caters exclusively and directly to many Law Enforcement & Government Investigative Units worldwide, striving to maintain a high standard of service, quality and consistency throughout the production, design and manufacturing process to ensure customer satisfaction.

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You shall not copy, reverse compile or reverse assemble all or any portion of the Manual or the Product. You are prohibited from, and shall not, directly or indirectly, develop, market, distribute, license, or sell any product that supports substantially similar functionality as the Product, based on or derived in any way from the Product. Your undertaking in this paragraph shall survive the termination of this Agreement.

This Agreement is effective upon your opening of the packaging of the Product, and shall continue until terminated. ESP may terminate this Agreement upon the breach by you of any term hereof. Upon such termination by ESP, you agree to return to ESP the Product and all copies and portions thereof. For further information contact ESP at the address below or contact your local distributor.

Warranty

Electronic Security Products, Inc. (hereinafter "ESP") warrants all instruments it manufactures to be free from defect in materials and factory workmanship, and agrees to repair or replace any instrument that fails to perform as specified within one year after date of shipment.

This warranty shall not apply to any instrument that has been repaired, worked on or altered by persons unauthorized by ESP in such a manner as to injure, in our sole judgment, the performance, stability, or reliability of the instrument; subjected to misuse, negligence or accident; or connected, installed, adjusted, or used otherwise than in accordance with the instructions furnished by us.

At no charge, we will repair, at our plant, or an authorized repair station, or at our option, replace any of our products found to be defective under this Warranty.

This Warranty is in lieu of any other warranties, expressed or implied, including any implied warranties of merchantability or fitness for a particular purpose. There are no warranties which extend beyond the description on the face hereof, Purchaser acknowledges that no salesman, agent, employee or other person has made any such presentations or warranties or otherwise assumed for ESP any liability in connection with the sale of any goods to the purchase. Buyer hereby waives all rights Buyer may have arising out of any breach of contract or breach of warranty on the part of ESP, to any incidental or consequential damages, including but not limited to damages to property, damages for injury to the person, damages for loss of use, loss of time, loss of profits or income, or loss resulting from personal injury.

The Purchaser agrees that the Purchaser is responsible for notifying any subsequent Buyer of goods manufactured by ESP of the warranty provisions, limitations, exclusions and disclaimers stated herein, prior to the time any such goods are purchased by such Buyer, and the Purchaser hereby agrees to indemnify and hold ESP harmless from any claim asserted against or liability imposed on ESP occasioned by the failure of the Purchaser to so notify such buyer. This provision is not intended to afford subsequent Purchasers any warranties or rights not expressly granted to such subsequent Purchasers under the law.

ESP reserves the right to make any changes in the design or construction of its instruments at any time, without incurring any obligation to make any change whatever in units previously delivered. ESP sole liabilities, and Buyer's sole remedies, under this agreement shall be limited to the purchase price, or at our sole discretion, to the repair or replacement of any instrument that proves, upon examination, to be defective, when returned to our factory, transportation prepaid by the Buyer, within the applicable period of time from the date of original shipment. Return transportation charges of repaired or replacement instruments under warranty will be prepaid by ESP.

ESP is solely a manufacturer and assumes no responsibility of any form for the accuracy or adequacy of any test results, data, or conclusions which may result from the use of its equipment.

The manner in which the equipment is employed and the use to which the data and test results may be put are completely in the hands of the Purchaser. ESP shall in no way be liable for damages consequential or incidental to defects in any of its products.

This warranty constitutes the full understanding between the manufacturer and buyer, and no terms, conditions, understanding or agreement purporting to modify or vary the terms hereof shall be binding unless hereafter made in writing and signed by an authorized official of ESP.